TRANSMITTAL LETTER
(General - Patent Pending)

Docket No.
00280799AA

In Re Application Of: **Chen, et al.**

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
09/783,491	2/14/01	Huynh	30743	2178	4639

Title: **User Controllable Data Grouping in Structural Document Translation**

COMMISSIONER FOR PATENTS:

Transmitted herewith is:

Notice of Appeal and Pre-Appeal Brief

in the above identified application.

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Dated: **March 8, 2006**

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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)
00280799AA

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Application Number	Filed
09/783,491	02/14/01

First Named Inventor
Chen, et al.

Art Unit	Examiner
2178	Huynh

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).
Note: No more than five (5) pages may be provided.

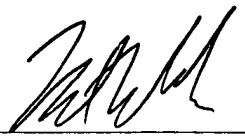
I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)

☑ attorney or agent of record.
Registration number 32,635

☐ attorney or agent acting under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34 _____



Signature

Michael E. Whitham
Typed or printed name

703/787-9400
Telephone number

March 8, 2006
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.
Submit multiple forms if more than one signature is required, see below*.

☑ *Total of 1 forms are submitted.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of

	Shyh-Kwei Chen et al.	Confirmation No.	4639
Serial No.	09/783,491	Group Art Unit: No.	2178
Filed	02/14/2001	Examiner: Huynh, Thu	

For USER CONTROLLABLE DATA GROUPING IN STRUCTURAL DOCUMENT TRANSLATION

Mail Stop AF
Commissioner for Patents
PO Box 1450
Alexandria, Virginia 22313-1450

ATTACHMENT TO PRE-APPEAL BRIEF REQUEST FOR REVIEW

Sir:

This Pre-Appeal Brief Request for Review is being concurrently filed with a Notice of Appeal. Please charge any fees due for the Notice of Appeal and this Pre-Appeal Brief Request for Review to Deposit Account 50-0510 (IBM-Yorktown).

The Invention

The looping problem in structural documents, such as those defined by the Document Object Model (DOM) and extensible Markup Language (XML), can have a remarkable impact on application programming. The problem is that similar data items within a document may repeat several times, and that related data items are not properly grouped together. The problem is most severe in documents represented in flat file format, for example EDI, and there are few or no data grouping tags or position symbols to distinguish the occurrences of loops. The invention provides a user controllable data grouping capability that can be embedded in a translation algorithm, or run as a standalone transformation.

The subject invention allows a user to create a static translation table for each type of document to be translated (see page 4 of the application). This static table is used by the subject invention to map the data fields of the electronic

format (e.g., EDI) document into the data format of the target document (e.g., XML) to assign tags and attributes to the data fields that may be encountered in the particular document type. This static translation table is created 'off-line' before the translation process is performed. Once the actual document to be translated is read, the static table is used to identify the unnamed (ambiguous loops) data fields as well as the other known data fields, and translate the document into the hierarchical tree structure. A dynamic translation table is created for the particular document which assigns attributes and/or tags for the various data fields including the unnamed data loops. Once each data field is tagged the translation application can perform the translation to the new document format. Before the final document is created, the dynamic table is used to strip out the added attributes that were used to identify the ambiguous loops (see page 4, line 15).

The structural table can be expanded during run-time. The data grouping method is performed in accordance with user specifications. Depending on the document structure, there may be multiple locations/tags that the user desires to have different groupings. The table embeds user-defined, or automatically defined in accordance with user preferences, structural information for recording hierarchical data groupings. In order to accommodate various grouping choices without changing and rebuilding the translation or transformation procedures a user would otherwise employ to process a structural document, the invention provides a table structure for recording the different options entered by users. The users may enter various grouping choices into the table, for different nodes identified by paths based on the target schema or the Document Type Definition (DTD) graphs.

An example of this is transforming a customer database into a receivables database. A user would know the general type of data fields that would be part of the customer database. The user would create a static table that maps the corresponding fields of the customer database with the appropriate named fields of the receivables database. The user could anticipate that some of the addresses might be entered by customer name or by company name each having the same address. So as not to have two invoices generated for each of the two names, a tag could be assigned that would recognize the address loop and assign it a tag such as "billing address." This static table would then be used for an actual document

translation. In the event that the condition of customer name and company were encountered, the subject invention would generate a dynamic table for that particular document that maps the company name with the customer name and ensures only one address is translated into the rew document format (e.g., the receivables database). The second address could be tagged with a temporary name (e.g., company) and that name could be entered in a loop with 'customer' so that the two different names would be entered as one entry with the same address (see, e.g., Figures 2 and 6 of the application).

Errors and Omissions

In the office action mailed 12/27/2005, the Examiner has repeated the rejections for claims 1 - 7 and 9 - 15 under 35 U.S.C. 103 (a) as being unpatentable over Hsing et al. (2002/0023113 A1) in view of Gajraj (2002/0002566 A1) and Pasetes Jr. et al. (US 5,202,977) and the rejections for claims 8 and 16 under 35 U.S.C. 103(a) as being unpatentable over Hsing in view of Gajraj and Pasetes as applied to claim 1 and in further view of Carter US 5,878,419 as stated in the office action mailed 6/29/2005.

In paragraph 8 of the office action mailed 12/27/2005, the Examiner states that the arguments presented in the response to the June 29, 2005 office action concerning the above named rejects are not persuasive. However, the Examiner is missing a critical element that highlights the differences between the subject invention and the combination of the cited references. Specifically, the subject invention is directed toward ambiguous loops. That is, loops that are not identified as loops through tags or other known XML X12 structural nodes.

For example, as shown in Figure 2 of the application, the ambiguity occurs because the sequence of elements N1(210), N2, N3, N4, N1(215), N3, N4 can form either 1, 2, or 7 loop iterations. The users can enter options to the rules for the desired number of loop iterations; hence resolving ambiguity during document translation.

The Examiner has admitted that Hsing "does not explicitly disclose identifying ambiguities within a structural document to include data loops that are not marked as loops" (see page 3 of 12/27/5 office action).

The Examiner has not relied on Gajraj as showing this missing feature (see

page 4 of the 12/27/5 office action). Similarly, the Examiner has not relied on Carter as showing this missing feature (see pages 7 and 8 of the 12/27/5 office action).

That is, the Examiner is relying solely, **and erroneously**, on the Pasetes reference as showing this feature (see page 4 of the 12/27/5 office action).

Pasetes, Jr. et al. (US 5,202,977) is using the X12 standard format to translate EDI document to XML format. This translation includes developing a tree structure using the X12 message, segment format which requires each node to be tagged with a designation as to its metadata type. Pasetes, Jr. et al. (US 5,202,977) uses these named metadata element to form the tree. This is completely different from the subject invention which is looking for untagged data loops and assigning a name (tag) for these loops. These tagged loops are then placed in nodes of the interim tree so as to perform the translation to the XML. Before the final translation can be completed by the subject invention, the temporarily added loop tags must be removed. In the event that undefined loops occur, Pasetes, Jr. et al. (US 5,202,977) requires the user to manual look at each ambiguous node and then name it as a loop during the translation of the document. The subject invention allows this temporary naming of loops to occur automatically using predefined criteria for loop identification.

The Examiner contends that Pasetes Jr. (5,202,977) provides the feature of identifying beginning and ending of loops that are not marked as loops. This is not correct. The Examiner cites Fig. 9 with col. 17, line 42 - col. 18 line 29 as describing the translation of ambiguous loops. This section of Pasetes, Jr. et al. (US 5,202,977) simply describes how the node structure is created using the X12 standard. It does not discuss how a loop that has not been identified as a loop is recognized. It is true that a tree can have multiple occurrences of loops or segments, however, these occurrences must be recognized either using automated rules as in the subject invention or by a user manual inspecting the document and tagging the suspected loops while the document is read.

Claim 1 of the subject invention very clearly states, "...method for processing a structural document to remove ambiguities from the document prior to processing, comprising the steps of:

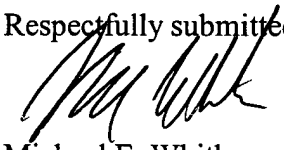
identifying ambiguities within a structural document in electronic format to include **data loops that are not marked as loops**..."

The very first step of the subject invention method is to address the ambiguities. The claim goes on to state that the identification of the ambiguities is done using computer resources on a document in electronic format. This is not done by a user reading the display or hard copy version of the document and noting the loops as it is read. The ambiguities in the subject invention are identified using, "...translation rules and data loop grouping options ..." defined by a user in a static translation table. Pasetes does not provide the data loop grouping of unnamed (ambiguous) loops automatically in the translation process.

Conclusion

Because the Pasetes reference does not disclose what the Examiner has said it discloses, and because no other reference of record makes up for this deficiency, none of the claims would be obvious over any combination of references of record. In view of the above, it is requested that the position of the Examiner be reviewed, that the rejections be withdrawn, and that the application be passed to issue.

Respectfully submitted,



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